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(54) Title: **TISSUE SUBSTITUTE MATERIAL**

(57) **Abstract:** Fibre-reinforced material that substitutes for cartilage-like tissue, consisting of a hydrophilic, relatively elastic fibre structure and a matrix of polymerised hydrogel. The fibre/matrix bonding is increased by saturating the fibre in the monomer solution before polymerisation of the hydrogel. The fibre preferably consists of a material based on polyurethane. More particularly, this material contains 10-70 % (m/m) fibres (based on the dry matter) and 1-5 % (m/m) (based on the dry matter) of a substance that contains ionised groups has been added to said hydrogel.

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